

Working Group Outline Computer Animations and Simulations

Computer animations and simulations are computer-generated productions that purport to represent the operation of some scientific principle or the recreation of events at issue in the case. They are increasingly being offered as substantive and demonstrative evidence in courtrooms around the country. The technology can make difficult concepts or mechanical events easier to visualize and understand, and can allow jurors to see things that would otherwise be impossible to illustrate. They also may provide a neat, comprehensive summary of all the expert testimony that the jury has heard.

Although many legal commentators tend to collapse simulations and animations into one concept, we distinguish them in the following ways. Computer animations reflect the use of a computer to create visual images with a sense of movement to illustrate a process or an event. They serve the primary purpose of illustrating a witness's testimony; as a result, they don't usually have probative value on their own and are usually admitted as demonstrative evidence. Computer simulations, on the other hand, essentially create new evidence from pre-existing data. The simulations incorporate rules of physics into mathematical models, and allow conclusions to be drawn based on the known facts (e.g., the sequence of events in a multi-car accident). As a result, simulations must meet a more stringent admissibility standard.

Drawing on the morning's demonstrations, this group will consider how empirical research can inform the debate over the use of computer animations and simulations in the courts. The group will attempt to translate into empirical questions the normative issues inherent in the debate, and identify the social and behavioral science theories on which the research might be based. Finally, the group will suggest priorities for research in the coming years.

We hope the group's report on Friday will address the following:

1. What issues related to the use of animations and simulations in the courtroom are the most important? Does this differ for different types of court proceedings (e.g., civil versus criminal, trial versus pretrial)? Does it depend on your point of view (i.e., society as a whole? courts? litigants? attorneys?)
2. Are the important questions susceptible to empirical study? If so, what are the corresponding empirical questions and on what social or behavioral science theory can the research be based? (The group may want to select just a few of the more important topics to consider in more detail here.)
3. What factors (economic, political, etc.) are likely to constrain the empirical research that can be conducted?

To Get the Group Started:

We've identified a number of questions related to animations and simulations that you may want to use as a start. (Despite the distinctions set out above, we use "animations" to refer to both animations and simulations for ease in setting out the empirical questions below).

- Even when given scenario specifications, animators and attorneys have a great deal of editorial leeway in constructing these displays (i.e., which aspects of the scenario to animate, the point of view depicted, the inclusion of a sound track, whether to use slow motion, etc). Do these decisions influence the conclusions that are drawn about the display?
- Are judges and jurors able to detect unrealistic animations? Can they make judgments about what is presented and determine whether it could actually have happened? Or does seeing it played out in front of them make them less able to critique it critically? How does the jury (or judge) determine whether the animation is a complete and accurate rendering of the scenario?
- How do the individual characteristics (i.e., familiarity with computers and image manipulation software, reliance on television, experience with the scenario depicted) of the trial participants influence how they perceive the animations?
- All other things being equal, do jurors accord evidence presented via animation more or less weight than evidence presented via other means in rendering their verdicts? What factors mediate this effect?
- How does use of animations affect jurors' perceptions of the case strength? What is the effect of one side, but not the other, presenting animations?
- Is it possible to reduce potential biasing effects of animations by judicial admonition?
- Do animations have any emotional impact on the jury? How do emotions influence jury decision-making?